

*Record*



1375 -

[1379-80 in other book]

Mosquitos pp. 1, 3-13,



1375

Mosquitoes on Florida trip, March 1905

- [1] Temporary rain pools in the pine barrens near rail road, Southern Georgia March 2  
Isolated 1, 2-3, 4, 5-8, 9, 10 (11 dead)
- [2] A similar pool with less larvae further along railroad. So. Ga. Mar 2.
- [3] In dirty recent dry pools along railroad Jacksonville Fla. March 2. Some puddles nearly dry, one largely pupae. Isolated 1, 2, 3, 4, 5-6, 7-8, 9-10, 11-14, 15, 16, 17, 18, 19-22
- [4] In pools in swampy land near Magnolia Springs Fla. March 3 [ditched along track at Green Cove Spgs. full of fish & no wigglers] Isolated 1-2, 3, 4-6, 7-9, 10-12, 13-14, 15, 16-17 (1 skin lost), 18, 19, 20-21, 22
- [5] One wiggler in a swampy piece with cypress knees Jacksonville, 3 miles south. March 4. (died)
- [6] Railroad ditch, & temporary puddles 2-3 miles south of Jacksonville, March 4. Divided into A & B  
A Anopheles. Isolated 1-3, 4, 5,  
B Short tubed 1-5 (only 4 skins & 1 dead), 6, 7, 8, 9-12 (2 skins lost, two pupae dead)  
C Long tubed 13-14, 15, 16, 17, 18, 19, 20
- [7] In dirty pools near tide water in mouth of creek Riverside, Jacksonville, end of car line. Mar 4.  
Isolated 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11-14 (1 skin lost), 15-17, 18-19 (1 skin lost), 20-24, 25 (killed by cyanide wash), 26, 27, 28, 29, 30-31, 32, 33, 34
- [8] Green Cove Springs, 2 m. south, temporary pool, priv. All Candell  
Isolated 1-4, 3-5 (1 skin lost), 6-7, 8-10, 11, 12-13, 14, 15-16
- [9] In a hole dug in the coral rock, white muddy with the lime, Miami, Fla. Egg boats, all stages & pupae, pupae.  
Isolated 1-3, 4-8 (11 dead), 9-10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21.
- [10] Large egg boats in a barrel of stinking milky water in orange grove near Miami River, March 7. Hatched same day.  
Isolated 1-2
- [11] One larva in head of drainage ditch of old water main at edge of Everglades, Miami, March 7. Stage III. (killed by cyanide wash)
- [12] Stage III in crab hole full of salt water in edge of mangrove swamp, peninsula, Miami, near canal cut, March 8



1375-  
Larvae on trunks of Live Oak trees Jacksonville Fla  
Mar 1 1905 (To Kearfoot)

1376  
Minute larvae under web full of red grass like  
saw dust on back of leaves of *Piscidia*, Miami Fla.  
March 6 1905 (To Kearfoot)

1377  
Chambered case larvae on saw palmetto Jack-  
ville and Miami, March 13 (To Kearfoot)

1378  
Larvae in flower stems of saw palmetto in  
the chested joints, Miami Fla, Mar. 13, 1905  
(To Kearfoot)

[1379-80 other book]

1381  
New Code (or fascicle) Tryp. W.C. Sept. 28 1905 on *Ceanothus*.  
Elliptical, rather elongate, tail subquadrate but not  
raised in the side like fascicle and prominent. Dorsum  
rather convex in d. aspect, just behind narrow to the  
ends, side nearly flat, for upper 1/2 then rising to the ridge  
3/4 region retracted. Hd in hind, dark yellow green,  
A sp. (1)(2)(3)(4)(5) light yellow spots, large, minute, numerous.  
A narrow yellow line in (1) darkened, interseg, very thin  
a more diffuse yellow band along (2) dark obsolete at ends  
a row of yellow dashes in (2). Spines visible. (1) line  
separate at ends. Smooth sparsely round granula on  
a smooth skin, no regular bumps over a (2) and  
seta obsolete. Length 8 mm. The depressed space,  
and without sharp or even defined edge, the granula  
running right across. They are of considerable depth  
ap(1) and (2) granules round well separated, uniform  
setae small arising from among the uniform gran-  
les on both ridges. Def. sp(3) in back curve.  
Olive seg - (4) a small yellow spot  
above & beneath on below (3)  
(5) large seg. (6) small interseg yellow  
spots in line. (2) dashes up to



les on both ridges. Def. sp(3) in back curve.  
Olive seg - (4) a small yellow spot  
above & beneath on below (3)  
(5) large seg. (6) small interseg yellow  
spots in line. (2) dashes up to

[13] Larvae in rain water barrels, Day View Hotel, Miami  
March 9. Isolated 1, 2, 3,

[14] Egg hatches and larvae in a rain water tank and  
scopage from a pipe of a reservoir, Key West, Fla March 10  
Isolated 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17,

[15] More stage I from the *Deinocerites* hole ([12]) Miami  
peninsula March 12.

[16] Pupae & larvae in a dry spring hole, sulphur  
water, center of peninsula Miami March 12.  
Isolated 1, 2, 3, 4, 5,

[17] Anopheles in a spring hole and deep hole both  
dry in coral rock near an old quarry above Coconut  
Scrie, Fla. March 13. Died April 18.

[18] In an old barrel partly set in the ground under the  
roof of the old quarry engine house, Coconut Scrie  
March 13. Isolated ~~X~~ *pipiens*, *B. fasciata*.

[19] Palm Beach Fla Mar. 14. *Culex* in rain water pools at  
edge of swamp, cut off. A short tube, 1, X B short tube 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000.

[20] Palm Beach Fla. Mar. 14. Anopheles in similar pools  
but more open and shallow. (Died all).

[21] Daytona, Fla., puddle beside rail road full of new  
rain March 15. Isolated 1, 2, 3,

[22] Old water barrel by disused pump back of Mildred cottage  
Ormond Fla. March 16. (*fasciata* & *pipiens*) Isolated ~~X~~ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16,

[23] Permanent or semipermanent rain filled swamp holes near  
the golf & golf grounds Ormond Fla. Mar. 16. Isolated ~~X~~ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000.

[24] Ditch by railroad full of new rain like 23 but with  
*Parosiphia*, Ormond Fla March 16. Isolated 5 *Parosiphia* = P.  
Isolated 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130,











- C80. Nigger slough, Gardena Cal. May 30 1906. Perennial water with reeds and scum. 1-2, 3, 4, 5 anoph. Got more on June 6 1906 in the reeds. 6 pupae, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17. Old bed in open 18, 19 anoph. 20-21 an., 22 an., 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33.
- C81. San Diego Cal. June 2 1906. Road puddle fed by leak in pipe. with algae running. more June 19. 1, 2, 3, 4, 5, 6.

batch of eggs was incised.

- C82. San Diego Cal. June 2 1906. Old water rat area wharf. ~~XXXXXX~~ 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34. more June 19. 29, 30, 31, 32, 33, 34.
- C83. Dia Juana Mexico. June 2 1906. Pools in river bed algae etc. 1, 2, 3-4, 5-6, 7-8, 9, 10, 11, 12.

- C84. Arceutwater Junction Cal. June 2 1906. Pools in stream bed. 1-2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14. more June 19. 15, 16.

- C85. Arceutwater Junction, Cal. June 2 1906. Reedy swamp. 1 wasp. 2 anoph. 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20-23, 24-26, 27-28.

- C86. National City Cal. June 2 1906. Salt water hole in marsh covered by fleshy weeds. 1, 2, 3, 4, 5, 6. more June 19. 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32-37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57. pp =

- C87. National City Cal. June 2 1906. Rain barrel. mostly pupae. 6 skins saved. 1.

- C88. Old Town, Cal. June 3 1906. Horse trough.

- C89. Water barrel Indio Cal. Taken by Mr. Candell June 9 1906. X2, X3, X4, 5, 6, 7, X8, X9, X10, X11, 12.

- C90. Drain at Indio, Cal. Mr. Candell.

- C91. Coachella Cal. in pond. Mr. Candell. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19-20, 21, 22, 23-24, 25, 26, 27, 28.

- C92. Yaguna, Cal. in a well hole by edge of lake, June 14 1906. 1, X3, X4. closed by weeds and dark.

- C93. Yaguna, Cal. in a well hole by edge of lake, full of carcasses, June 14, 1906. Top open, algae. X2, X3, X4, 5, 6, 7.

- C94. Yaguna, Cal. in eel grass in the edge of the deep lake. very few larvae. 1, 2.

- C95. In a rain water barrel Santa Catalina Is, Avalon, June 14 1906. Mr. Candell. X2, 3, X4, 5, X6, 7, X8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24.

- C96. In water in the cellar 1210 Westlake Ave. Los Angeles Cal. 1, 2, 3, 4, 5, 6, 7-8, 9, 10-11, 12.

- C97. In a strongly brackish large puddle, solidly full of fine eel grass between beach and railroad, Redondo, Cal. June 25 1906.

- C98. Big reedy fresh swamp, San Anofe, Cal. at mouth of river by the sea. Full of red-backs adults. water deep. Fish 1, 2.

- C99. Cattle-track puddles at outlet of 98 swamp, San Anofe, Cal. water running in little stream stamped up in the mud. 1, 2.

- C100. A large pool of clean water behind a clay dam in Anoyo under rail road bridge at Estrich Farm June 30 1906. Contains mostly spot-tarsalis, incidens, territans, var-tarsalis?, and a few Anopheles. 1-2 (3) 4, 5, 6, 7, 8, 9 territans; 10 spot-tarsalis; 11.

- C101. In old tin can at San Luis Obispo. Cal. June 27 1906 (Mr. Candell) X2, 3, 4, 5, 6, 7, 8.

- C102. In pool in a rocky cañon on side of big hill near San Luis Obispo, Cal. June 27 1906. (100) (93) (67) (17) (4) H. 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29.

- C103. Rain water barrel at San Luis Obispo (Mr. Candell) June 27 1906.

- C104. Slows covered with reeds, Guadalupe, Cal. June 27 (Mr. Candell). (1) (2) (5) (7) (8).

- C105. In puddle in bed of river Guadalupe. Cal. June 27. (1)

- C106. In water in a cellar San Francisco, Cal. June 29 1906. (1) (3) (4) (12) (13) (15).

- C107. Puddle by railroad, Eureka, Cal. July 2 1906 (Mr. Candell) (1) (10) (2) (3) (4) (5) (7) (8) (9) (11) (12) (13) (14) (24).



- C108. Vents of water on an island opposite Eureka Cal. (McCardell) 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18.
- C109 Barrel of rain water on an old wharf. Eureka Cal July 3 (McCardell) 1, 3, 4.
- C110. Rain barrel in Eureka. 2
- C111 In a drain in Eureka (McCardell) 3
- C112 In a reclaimed salt-water swamp. (McCardell) Eureka Cal. 1, 2, 3, 4, 5, 6, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31.
- C113. Salt swamp at Eureka Cal. July 5 1906 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22.
- C114. Slightly brackish water by railroad Eureka Cal (McCardell) 2, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31.
- C115. Horse trough, Chico, Cal. July 11, 1906 (McCardell) 1, 4.
- C116 Barrel in a stream, Plant Introduction garden, Chico Cal July 13 1906. 1, 2.
- C117 Edges of streams etc, Chico, Cal. July 13, 1906 X, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31.
- C118, Dunsmuir, Calif. in shallow pool of cool water by the R.R. July 15-06. insidens  
Isolated 1-2-3-4-5-6-7-8-9-10-11-12-13-14-15-16-17-18-19-20-21-

- C119. From a slowly moving ditch of cool seep water by R.R. at Dunsmuir July 17-06. Tarsalis insidens.  
Isolated 1-2-3-4-5-6-7-8-9-10-11-12-13.
- C120. From the middle of a quite rapidly flowing stream of cool water by the R.R. at Dunsmuir on July 17. Some muds had lodged in the middle of the stream, which was a couple of feet wide and fed from springs. I have not found shute in as rapidly flowing water before. Isolated 1-2 which is all the larvae.
- C121. In a small pool of stagnant, stinking pool by R.R. at Shasta Springs. July 18. I got too much seen in bottle & all died. Or maybe it was some mineral.
- C122. In cold water in a little pocket in a hill near Shasta Springs. July 18. All insidens & thrown out. Were all small.
- C123. Tarsalis insidens. In warm pool by R.R. in cow tracks near Dunsmuir, July 18. Isolated 1-2-3-4-5-6-7-8-9-10-11-12-13-14-15-16-17-18-19.



C124 In salt pools in thick-leaved plants below  
sand dunes, Carpinteria, Cal., July 20 1906.  
X2, 3, 4, 5, X7, X9, 10, 11, 12, X14, X16.

C125. In slow half mile from B.A. near Shasta  
Retreat, July 21. All Tarsalis. none isolated.

C126 Sisson, Cal., 3500 ft, July 23 1906 in springy  
grassy meadow. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, White Dixa

C127 Sisson, Cal. July 23 1906. In edge of cold  
stream covered with grass. 1, 2, 3, 4-5,

C128. Sisson Cal, in roadside puddles.

C129. Shull, Cal., July 25 1906, in puddles in alfalfa  
field and caught. 1, 2, 3. Caught more every July 28.

C130. In rain barrel, eating station above Pokegama Cr  
July 26 1906

C131 Klamath Falls, Or., in swamps pools etc  
and caught. July 27 1906,

C132 Klamath Falls, Or., in hole in rock dry  
at Ford. works, July 27 1906

C133 Tacoma Wash., Aug 1 1906. In pools in salt wash  
and caught in grass nearby. Isolated 20.

C134 McRae, Wash., in a pool cut off from a stream  
at Paradise Valley Aug. 3 1906. 1, 2, 3, 4, 5, 6, 7, 8.

C135 Ashford, Wash. in a muddy pool. Incidents common  
in barrels. Isolated 1.

C136 Wellington BC in Dr Taylor's rain barrel and in a  
stream full of water vesicles. 1, 2, 3, 4.

C137 In a puddle near the lake edge, Lake Louise, Yagga  
Alberta, Aug. 18/1906. 1, 2, 3, 4.

C138. Rain barrel at depot, Calgary, Alberta, Canada  
Aug. 22 1906, 1, 2, 3, 4, 5

C139 Rain barrels in ground at railroad Medicine Hat, Alta  
Aug 23 1906. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13.

C140 Puddle cut off edge of shallow lake, North Portal, Sask,  
Aug 26 1906. 1, 2, 3, 4

M [for Mosquitoes in BB] 141 Anopheles and Uano-  
taenia in dug pools with cat-tails, Arlington  
Va., August 12, 1917

M 142 Anopheles and Culex in swamp under grass and  
bushes, Arlington, Va., Aug. 26, 1917

M 143 Egg hatching deposited at night in the screened  
house in the 141 water, August 1917



1382

Red Argia, Burke, Sumnerland Cal, Dpt  
Agr no. 4430. Eggs to Fall 1906. In mass on cecum  
covered with white furth and dark gray hair from  
mouth. Eggs subspherical white smooth.  
One hatched May 15 1907. Hd rounded black w.  $5 \pm$  Bdy  
subcylindrical, somewhat quadrate, square ended. Large sd ant  
on joint 2 prominent, gray. Trace of lighter color band sd on  
5-12. Vents large black ii iii iv vi. Hair long abundant  
black d. pale s-v. Feet long with long shaded black  
at apices. More hatched May 17

Ixviii

Aug 17 1907

1383 = 911.

Egg of *Catantides confusaria* June 19 1907. Sub-  
cylindrical, the micropyle end even truncate the  
flat area nearly as large as the central diameter.  
Other end rounded, the 2 diameters nearly equal.  
About 20 longitudinal ribs even sharp white crested  
stopping at the edge of the truncation, slightly beaded  
even, striate fine obscure. Micropyle dark, coarsely  
reticulated at the edge over centrally. Black part  
turning to dull red the ribs & sets. White.  $9 \times 6 \times 5$   
Hatched July 1 Hd rounded black, slightly shiny epistoma  
white. Body moderate, other parts the feet normal.  
Dark brown brown banded with grayish white, a narrow  
band a thorax between the feet a little irregularly edged  
& abd bands same as broad as the intervening spaces, and  
on 5-9 cut by a narrow thread-like sd line which  
widens at its joint junctions with the dark areas  
bands narrowed ventrally. A trace of dark d. line  
cutting the white bands and, a hyp. and divided  
of a broad adv. a narrow medio-v. lines, 10-13 with a  
narrow sd and broad blotchy s-v white bright line  
feet dark inconspicuous. At dendelion, refused trees -  
July 11 in II? Hd .7 quadrate rounded slightly bilobed wide  
than high minus black epistoma and. 2 ventral mottled  
line on lobes white. Body moderate feet normal well  
joint, segs annulate. Dark brown brown a dorsal  
white mark on 5-9, a large mottled lat blotch joint  
cut by s-v fold. Slight white smothering sd, lat a tubal  
on 2-5 10-13. ventral dotted on tubercles. Vents feet black  
and feet large dark with a white outer line.  
Sclerites inconspicuous, no bumps or elevations.  
A medio-v. white band cut by a longitudinal line and  
the annulet incisions.  
Shed July 16 Hd .1. Same Hd rounded quadrate wide minus  
black lat broad mottled erect white band on face of each  
lobe, divergent below, a white triangle in  $\Delta$  epistoma a mass  
of and. white. Body robust, weakly annulate, d. & other  
white patches as before, more mottled and cut by ground  
color which is darker, brown blackish. T in lat patches  
lumpy white.

Shed July 21 Hd 1.4 Same markings, more do that  
Hd on black epistoma white, white diffused settings







*Calceolaria confusaria* Hübn  
Hatched September 4 (fig) 1843  
Museum of the L. 18, but as appears  
from the text 'this' is the larva  
of *glauca* L., which is perhaps  
justly a distinct species. Anyway  
the larva does not agree with



Book of Congresses. No. 1886  
(Ent. No. III 47 1887) no. 1886  
possible for record of attendance.)

that the names were swept  
from the book given no  
description. The present is  
the first account of the same.

IXVIII - ~~IXVIII~~



hardly over creases & legs and slightly - 2, rounded quadrate as high as wide, dist. 1. smooth dark. Body robust, somewhat uniform. Immature black annulate, dotted white. Ed line 2-4 of marks 5-8 centered by 1 white dot by annulate incisions, obscurely ground by greenish d. part. on 11-13 a narrow black sd roughly imitating the triangular marks. A series of stip white patch 5-7 joined by a line white line 8-12, bearing a narrow black line. feet, narrow, narrow, narrow, a subd. foot 10 & 12. Venter obscurely white streaked with a pale m-v line dark centered, small white dot lat. esp. at ii & iii. Orange blotches in white lat. body ground the marks pale & brown yellowish but have a light white lat. spot a 5, 6, 7, largest on 6. Head 1/2 of body 1.8 rounded quadrate thick on high as 1.5 narrow. Body black with brown white dot on side on 2 & 3, a dark black dotted band on vertex of lobes. Venter white, dark brown uniform feet normal. Leather brown (dead leaf) dotted with black a narrow orange black 2-4, the 2-4 white spot, head in the brown ground leaving up a white white swelling about 1. White line on ocherous concolorous. On a small white line white lat. line black edged. Large white spots about 1 on 5-10 faint part in vertex 10 by 6 lat. on orange spot about 1/2. Venter with subventral in distinct line of black & brown subventral white. Venter dark, abd 10 white lined 9 & 13 large marked with a white band mid. that gives a faint stip band composed of confluent of stip patches on 9-13. Slightly tinged stip band 2-9. Head 1/2 of body 2.4 rounded quadrate thick, vertex rounded. Head level with 2. colored as before but white more extensive, may be described as white with circled dark dark brown marks which are confluent on sides & broadly cast side median suture a few on border within 2. legs black, epistoma white labrum brown, ant. white. Setae short brown from small shiny tubercles, normal. Body robust cylindrical uniform, i 12 slightly enlarged, thin. a black small one behind. Coloration somewhat as before. Legs minutely annulate. Growth around the mouth brown, ocherous yellowish on the sides shaded

1548  
Hatched from egg sent by Prof Cockrell  
Boulder Col. Mature July 16 in plantation  
& damp place. Ht. 3.2 rounded venter, in 2. Venter  
pale brown concealed on each side with white  
subventral dots & in on entire, streaks above  
ocelli with a slight brown line between.  
Shields numerous on unconvinced tubercles  
minutely brownish iv have edge 1 on 7, higher  
post. 1/2 way to v. on 11. Dorsal yellowish brown.  
A grayish black dorsal line winding in and  
edge 2 & part of 13. Surface fine black ret-  
iculate. II a black dot a faintly broken  
black 1 sd, slightly oblique cut. A broad black  
darkened space deepening to near colored line  
head though even subventral band which is  
greenish white blotched centered with reddish  
lining. SV greenish brown pale, whitish dotted  
head pale brownish topped.  
In ground a slight web.  
In Larvaria unipuncta!

1549  
Body blackish. Thin arched legs pinkish white dotted  
with brown black. Head 1/2 of body (head band touched  
with ocherous. A black lat. patch 3 & 4, 5-8 blackish  
shaded, feet dark brown. Head 1/2 (head) white dotted black  
with ocherous & sparse with black a narrow sd black  
shade composed of dots and his appearance large wide line.  
Venter black a large white spot on about iii & 4  
growth on 8 and ocherous one on iv, distinct on 6 faintly 5-  
17 but in a lilacine shade 8, & rising with a band  
of 13 lilacine sandy & narrow pale yellow stripe on  
outside feet 10 & 13. Venter dotted showing brown pale  
m-v line, narrow dark one cast side narrow pale one  
to a broad dark one on vi-vii, all rather translucent  
under lens - strong. Sd shade 10-13 looks into  
oblique shade of dots i-12 white, anal shield, leg  
white darkly marked a white ground. T small black  
setae short stiff brown.  
Spine Aug 9 of Larvaria leprosa, slight web







Hd. 1.3

Stage I from Mr. Ch. T. Hatch July 21 1907  
 Not mottled with isolated minute slightly bilobed  
 shiny greenish black eyes black, mouth brown  
 tipped. Body robust uniform blackish enlarged  
 feet of 7-8 a little smaller & not very marking  
 prominent greenish, 1-6, by 1-6, 1-6, 1-6, 1-6  
 and large round tubercles shiny black. 1-6 12  
 setae rather coarse moderate black single.  
 Egg Having smooth, pale green shiny,  
 ribs very fine, obscure, numerous all defined  
 striae radiating from the center. Color olive  
 imperceptible. D. .6. Yolk in a patch  
 covered by a thin layer of whitish mottling.

1386

Just hatched  
 Trypa U. C.

|       |     |           |
|-------|-----|-----------|
| Aug 8 | 1.0 | first cat |
| " 9   | 1.6 | " cat     |
| " 10  | 1.4 | " 1/2 cat |
| " 11  | 1.5 | " cat     |
| " 12  | 2.1 | " "       |
| " 13  | 2.4 | " "       |
| " 14  | 2.4 | " 1/2 cat |
| " 15  | 2.4 | " "       |
| " 16  | 2.8 | " cat     |
| " 17  | 3.3 | " "       |
| " 18  | 3.7 | " "       |

later to shed

|                          |      |         |
|--------------------------|------|---------|
| Sept 2                   | 12.0 | to shed |
| " 3                      | 12   | by hide |
| " 4                      | 12   | cat     |
| " 5                      | 13   | " "     |
| " 7                      | 15.5 | " "     |
| " 8                      | 16   | " "     |
| " 9                      | 16   | " "     |
| " 10                     | 15.5 | alive   |
| The horns &<br>went down |      |         |

Aug 8 1907. Shell broad elliptical, but not  
 quite spherical, flat even, shell white  
 lustrous, evident transverse & shiny no  
 mottling. 1.1 x 1.0 high on back of half moon  
 middle free from horns.

Stage I. Elliptical, somewhat flattened during  
 1st. and thickened, faint slightly lustrous  
 All smooth shiny translucent whitish  
 good giving a green tinge. Hd small white  
 in 2. Spines long & pointed, single with  
 a false central part 1-5 on  
 3 & 4. 2 rows on the rest, appearing quite  
 normal as in Thoburnia, color white  
 alternate rows 7, 8, 11 & 12 rows lean  
 outward. S-V rows equally long and  
 alike uniform. So ridge a little more  
 opaque whitish.

Shed Aug 11 Elliptical, back flattened. 1st  
 horns thickly covered with  
 placed around the 1st margin  
 of about equal length except  
 3rd pair which are short and the  
 1st pair are rather small. 3rd  
 the long one before the first divided

many straight before, then a short one and long  
 one alternating, the 1st long one being the first pair. Base  
 of horns broadly thickened leaving a narrow groove  
 all forming covered with short pale hairs. S-V horns  
 numerous, concealed. Translucent whitish green  
 like glass. Head whitish, anterior horn of 2.  
 Shed Aug 15 Elliptical, flattened, the 1st horns minute  
 short under 1st margin, rounded, radiating evenly, the 1  
 9, 9 & 11 a little over 1/2 as long as the other  
 and 1st pair not perceptibly shorter with rounded  
 bulbs at their bases, covered with fine pale  
 hairs. Translucent pale green, the horns  
 a little opaque, the narrow dorsal part  
 a shade darker.

[See 732]

2 last horns out from Sept 3.



1887

Eggs from Luper Taper, N.H. Aug 9, 1907.

Egg Ellipsoidal, one diameter less than the other, slightly depressed at one end, flattened at the other, covered with coarse rounded pits, about 8 to width of egg, uniform; set slightly whitish, edging the pits rounded reticulate. Pale blue-green, turning red.  $8 \times 5 \times 4$  mm.

Hatched Aug 13. Hd brown, full size brown as also anal feet. Body slender, active, whitish, a pair of red brown col lines joined into one on 10-13. A broad ventral stripe, staining the feet of 10, and a large black mouth brown ending at a point on 13.

The feet pale. Shed Aug 24. Hd 5.2 (small) slightly bilobed, pale, darker on sides, brown by black mouth brown. Hd long, slender, rounded finely annulate; dull greenish, 2 broad light contrasting ed brown bands, confluent 10-13; a broad ventral brown line coloring feet 10 and 13 narrowly and. The feet small dark at base, yellowish. Feet fold somewhat irregular.

Shed Aug 30. Hd 8 (small) black, blackish white, ant. whitish, long black line above mouth, black whitish in brown hairy a pale streak on each and a transverse line of blackish dots on 2 and 3, black dots in center. Body moderate, normal smooth, dorsal all shaded in brown with faint brown greenish add. lines; 5-8 edged pale greenish, a narrow median brown band staining feet, some line spot at apex of VII. The feet dark.

Shed Sept 3. Hd 1.2. Head capsule held feet, broad and wedge shaped at vertex, ant. projecting, white, whitish thickly mottled with dark lines, ground in a transverse band, below mouth, and a black line, face hairy, a pale line over 2 and 3, and a white line side, less strongly darkened, body cylindrical, narrow, thin, and 10-13 slightly smaller. Sides whitish green, indistinctly whitish toward with some black-brown slightly rounded dots at vi and vii (4 dots) dorsum & venter broadly shaded in dark purplish brown the edges grading off imperceptibly. 3-5 darkest all over with a whitish purplish border on sides. Feet of 10 yellowish ventral dark, hind and 1 foot. 12-13 all dark with a little purplish lightening on the sides.

Shed Sept 9. Hd 1.8. Flattened, head flat, gray, a side as vertex face thickly mottled with black, leaving a large dorsal white band over 2. Ant. white, projecting, black cylindrical, narrow, is slightly enlarged, more so on

3-9 and 12, esp on 9 where they are papillae, blackish. All tubercles dark and a little elevated. Dorsum cutting purplish brown, marked with the dark black tubercles, side very finely longitudinal, <sup>marked</sup> with pale, the venter ashen whitish dotted with fine reddish mottling and black tubercles. The feet ashen, brown-black hind. Ald of 10 ashen, dark hind with ant. of 13 all dark like dorsum. A small white speck on 5.

Shed Sept 30. Head slightly bilobed, flat before, full at vertex, held obliquely. Blackish gray dotted-mottled a broad whitish transverse whitish patch over large part of 2 and 3, thorax. Ant. projecting, whitish with dark shade on basal joint. Body cylindrical, uniform 11 of 6, 9 & 10 elongate, papillae, all the tubercles slightly prominent on 10-13, others normal with slight dark setae, dark brown shaded and mottled, the outer side of antennae, the feet, papillae tubercles and feet of 10 purplish whitish shaded, center of body 7-8 blackish shaded faintly. no markings, collar no bump. Feet of 13 large broadly triangular, dark.



are fusiform  
& apple

1388

1 egg by 2 *Super Sabulodes sulphurea* Pack Taper  
NC Aug 11 1907. Ellipsoid head one end obliquely  
flattened, a small flat area in the middle of  
the flat side. Rets very small and obscure. The  
surface appearing smooth slightly irregular.  
Subfunicular in the large oblique. Head  
Ground turning dark red. 1.0 x .9 x .6 mm  
Hatched Aug 19 Hd reddish pale reddish legs black. Cervical  
line long slender, active feet normal. Large thread-like  
bristly annulets. Side whitish, green from food & brown  
from stained dark brown at 8 & 9 bands. Feet 10-13  
brown held within. Shields & tubercles undifferentiated.  
Aug 25. Shed a molt? Hd .5 pale reddish held out flat. Body  
slightly annulate, dull greenish on sides, dusky brown  
diffusely brown. Side below. Venter broad brown, brown  
& brown light green in a 3rd seg. Feet feet brown,  
abd. slender, brown stained within.  
Shed Aug 28 Hd .75 held out flat. Headed then whitish, venter  
9-10 & mouth marked in brown, a band of brown mottlings  
on venter and each side, leaving a pale band between; whitish  
below. Body moderately robust, stayer uniform, slightly rough  
and of small tubercles. Mottled whitish 1-3 segs prominent  
brown. Venter broad brown, 8th fold rather high green  
white blackened ventrally in segs. Feet dark. No shields.  
Shed Sept 1 Hd 1.1 held out flat. Head at mouth, full  
above, dark brown, a little lighter at sides behind eye,  
and white. Body cylindrical, smooth narrow, and  
annulate six ridges projecting. Dorsum & venter broad  
brown shaded, sides green, whitish on 2-4 and 10-13  
Feet soiled brownish, 13 with a lighter outer line,  
3 slightly collared with a transverse black line dorsally.  
Shed Sept 16 Hd 1.8 flattened held out flat dull black  
nearly without markings, and projecting, 2d joint small  
brown pale at the joint. Hd moderate angled at 3  
with 1 pointed side corner to the angle, else smooth  
& uniform without raised tubercles, and slightly down-  
late near maxillae. Uniform blotched purplish  
brown like dark twig near tubercles markings. 4  
narrow pale A. line between 6th & angle of 3; a slight  
A. joining in 12 before the tubercle. Venter light, reddish  
shading to brown, narrowed except for blackish tubercles.  
T. black small, setae dark rather long, the T. slightly elevated

but not conspicuous. Shields undifferentiated.  
(Shed Sept 25)



9/1/09

1389

Portulaca on yellow water lily, Hyattsville, Md.  
Aug. 14, 1907. C. L. H. 11. *Eustrotia caduca* Set

Egg. Shape of sphere, base broad, flat, low domed. 40 radial  
ridges at margin diminishing by intercalation irregular  
to center. even area faint green. Pale green. D. 7. 1/2  
marginally high on back of leaf. 2 small patches.

Hd. 1.6. Slender, flattened, just round spreading up to 13.  
Translucent pale green. Red round. lobed like flat.  
lobes bulging green shiny with a few small brownish  
black spots. Labrum pale. Side of head with  
red. large. Spinulae white. Head 9 12 large.

Hd. 8. In all green, labrum whitish, eye black. Curly, 3-seg.  
and when extended, usually straight out on back.

Hd. 6. Same.

Hd. 1.1. Same. no spots on head.

Ant. Hd. 2.1. Round red and round in front with  
short web. Hd. flat before, half flat before. 2  
slight lobes round. Pale green. Translucent with  
a few pale and brown subangular spots. Body  
entirely without granulation the feet more and  
with long granulation of 13 spreading. Smooth  
translucent pale green. A set of 8 seg. whitish green  
lines to eye with a pair of pale red brown angular  
dots below the set. On each seg. feet small  
line of 4 seg. line narrow, seg. disappear, on  
set of 4 line narrow line on each seg. 1 seg. 13v  
which are on fine as to be not shown by eye  
large white. To 3 minute, 3 black seg.  
Antennae large, well jointed.

10/30/09

1390

long slender, white, 3

*Androcampa flavescens* on pear, Columbia Rd., and Starnard  
St. Dorchester Mass Aug. 20 1907.

Aug 20. 4.9 cat. 5-6 mm to head: (slightly round) dorsum  
abundant, white, feet and angle between back  
& sides. Thorax 3.4, 5 equal. Long large  
width of body, well defined - 6 minute, 7-10 small

22 6.6 " almost spherical, spined, 11, 12 stout conical.  
26 6.5 " almost 1/2 as long as 3, spined - 13 almost like 3  
28 9.0 cat. long, divaricate joint. 2 horns 3 short cone-  
30 10.5 " 4 long slender, nearly as long as 13. 6 very small.

32 10.4 " 7-10 small, 11 slender but almost as long as 11,  
12 long as 13. no spine patches or caltropes.

Sept 2. 14.5 cat. Translucent olive green, spine on long  
3 12 " black, a narrow white set line 6-10. 6 broad  
4 13 " faint yellow band in D. curved in middle edge  
5 13.5 5th. by lobes and faint white edged, a broken  
6 12.5 4th. white line in middle of lat. space, a faint oblique  
7 14 cat. band along 2. Skin?

8 16 " Def. space? more flexible and elongate than most codes  
10 21 " 11 19.5 6th. 12 11 4  
13 19.8 6th. 13 19.8 6th.

reared  
± 25 mm

Aug 8 mm to head 13-5 equal long, 4-5 divaricate i  
a square, 6, 10 minute, 7-9 small, 11 = 1/2 5, 12 = 1/2 11  
13 = 3 slender. 13 small, 4 & 12 long = 13, 6  
minute, 7-9 moderate, 10 small, 5 slender the  
apical up. Translucent greenish, d. line about  
replaced by slight dark shade, yellow band in D  
irregular middle of 7-9, replace of a bridge  
between thorax & wing, wing about base of  
thorax 11, 12, lat white line present centrally  
yellow in 2. Tending to ringhorn and joined  
at ends. Horns well spined, spine black.

Skin smooth shiny, appeared sparsely granular (here). Def.  
spaces indicated by interseg. hollowed out, not defined.

On 9.8 6th line round Horn 3-5 = long erect, 6 minute  
7-9 small, 10 small, 11 moderate, 12 small, 13 long but  
shorter than 3-5. 2 3 small, 4 long, (5 about) 6 very small  
7-9 small, 10 very small, 11 moderate, 12 long. Irregular  
yellowish opaque band 7-9 with bridge & 4 smaller d. seg.

containing central white line in a purple shade.  
band yellow along 2. and white line in lat. seg. Horns  
dark from the black spines. [Skin much more granular]

Def. seg. 1/1 at 1. intensity of color contrasting as dark dots  
below skin midline of 1/1 d. line. On sides obscure  
pale dots 4/1 seg. feet, (5) (6) in line above base 2 horns



Hd. sides by black patch each side. Cth. large black.  
 Stage IV wings like A stage. Ground yellow. D. band forming rings  
 on horn 11, 12, small bridge 12, just one 8, dots 5-11. D. sp.  
 enlarged at ends, color black, narrow white d. line.  
 Purple infiltrated d. sp. slightly on 11-12. Last d.  
 (2) band. D. sp. 11 (14) as usual hollow.  
 Sample had single like 82 V.

" " Sept 4 VI

" " Sept 6 long caltrop patches = Stage E VII

several to spin Sept 16, as seen breeding each found  
 slightly hind.

marked 1. 7-10 cut by a deep pale blue line. Blue  
 last patches 4, 5, 6, 10, 11, 12. Horn greenish yellow, a  
 broad yellow D. band 7-9 tapered at 6 and 11, yellow  
 line 3 and to D. bridge 12, the yellow spots 5 & 8 and real  
 detached from horn core. Yellow bridge 12 at 13, top of  
 12 going to middle last & enclose (1) dots of 12-13.  
 Side narrow greenish with a central pale yellow line 7-10.  
 D. ridge yellow, 1st greenish, lat. edge pale yellowish lined.  
 Skin with rounded horn rather than sharp points. ~~inattentive~~  
 Def. 8, 9, 10 very slightly indicated with discoloration.  
 F 13.5 (last stage?) 30 horn short, 4 large, 5 large, 6 & 10 small  
 7-9 small, 11 like 4, 12 & 13 small about = 3. D. horn 3 very  
 small 4 = 4D, 6-10 small, 6 & 10 = little small 11 & 12 =  
 12D. Horns greenish yellow, green yellow with black tips.  
 A little band of caltrop at line 1 horn 13 and 14 above pale  
 yellowish coloration as before. D. horn dark purple  
 instead of 2-5 and 10-13, marked with bright blue in the  
 narrow and in lat. spot. a thin widening. The rest bright  
 yellow except a narrow band in lat. sp. and 5-8 area  
 which are brownish greenish. Lat. line 1-5 edge yellow.  
 Def. sp. slight (1) granular center showing pale, faint (2)  
 same distinct, forming central lat. as a yellow cut in a  
 brownish area yellow edged below. Yellow bridge 3, 4  
 5 dot on 5, broken bridge on 11, watercolor on 12-13 and  
 going a great arrow (1) sp. Skin clear greenish the  
 granular irregular in shape, shagreened, 2 bright  
 d. line green with several black spots. Hd. in horn large  
 black, creeping dark honey yellow.

Stage 10 horn cut whole leaf, Aug 25. Elongate, midrib, a little  
 concave center of 3-5 enlarged, 11-13 less so, dorsum  
 even rounded, no ridge at D. lat 5-8 space contracted.  
 D. horn 3 moderate 4-5 long, 6-10 small (6 & 10 smaller)  
 11 moderate, 12 short 13 about like 3. D. horn 3 small, 4  
 longer than 13, 6-9 small (9 smaller) 10 moderate, 11 long like  
 4, longest of any of post horns. Translucent olivaceous  
 horn yellowish, black spirals, with yellow cores. An open  
 yellow bridge 3 crossing D. horn to 23 to 24, joining yellow D.  
 horn, then narrow 12 to 13; yellow bridge 4 D; spot  
 in base of 5D joining core, D. horn 6-10, tapering to point in  
 6 & 10; one spot D. narrowly joining 12. Dorsum 4-6  
 dull brown-red infiltrated, 7-12 blackish olivaceous with  
 a d. median submarginate bright blue line spots-8.  
 Skin crinkly shagreened in clear curved ridges. Def. sp.  
 (1) whitish line transverse between blue horn and D. horn  
 narrow whitish lat. line cut by (4), (5) & (6) level, fine  
 granular dots at bases of D. horns against yellow lat.  
 line narrow pale layer black vertex in 2. Cth. 1 black.  
 The lat. of narrow line infiltrated each side while turn, the  
 line itself replaced by bright blue on 6 & 11. (11 mm)  
 Aug 25 (13 mm) Horn same, + infiltration of red d. sp. also  
 on 10, blue spots last 4, 5, 10, 11 and white line ventral edge  
 Stage 13, 13.5, 13.5, 13.5 about 13.5. Head Aug 25. Horn 4, 5- long short  
 colored, D. horn moderate about 7.5, 6 small, 7-9 small longer  
 than wide, 10 small, 11 similar to 4, 5 but less long, 12 = 1/2 11,  
 13 slender large than 4 about = 4.5. D. horn 3 small short,  
 4 large = 13, 6 small, 7-9 large, 10 small, 11 = 3/4 12, 12 slender  
 = 13 or 2/3. Horns yellow, solid, black spirals. Color as in  
 end of last stage. Dorsum red infiltrated to 23-6 and  
 10-11, narrow d. lat. spot, else darkly lined cut by  
 blue d. line 6-10 and lat. white line 6 spot-10 and, yellow  
 horn line 3 to 4, bridge horn 4D, spot to core horn  
 5D, broad D. horn 6-10, and spot to core 11, bridge  
 12 and 13, broad whole of 2 ridge. 5-8 space colorless  
 with white 5-8 edge line. Differs blue lat. patches  
 4, 5, 6, 10, 11. Skin crinkly shagreened, Def. sp. slight the  
 granular center indicated lat. of colorless dot with  
 short dorsally. Sept 13 17.5 to 18, elliptical sides parallel 3 x  
 as long as wide, middle a little contracted, dorsum arched  
 sides slightly sloping 5-8 and not retracted, Dorsum  
 broad dark red 3 & 6 and 10-12 reaching D. horn, lined  
 some caltrop at horn horn 13 & 12.







July 31 '09

1390 (cont)

Got an egg on my nose bush June 7 1908, probably from the Chinese cocoons which issued first, but some of the Boston ones were out. Elliptical flattened but undulated thick, shiny colorless transparent like water drop.  $1.8 \times 1.2$  Single on bush but free of it. Hatched June 12. 1.3 mm elliptical dorsal flattened concave sides sloping toward Euclyp slope. Horns small  $\odot$  4-5, 11-12. Large post subequal colorless whitish shiny. Skin smooth iridescent yellowish but of horn black  $\odot$  3-5, 11-12 3-haired, 6-10 2-haired  $\odot$  3, 4, 12 3-haired 6-11 2-haired. Short horns even and regular more adnate 8 not larger.

| June 14 | 1.5 cat    | Shed June 13. all transparent whitish                         |
|---------|------------|---|
| " 15    | 2.4 "      | green from food. Horns $\odot$ 3-5 11-12 large                |
| " 16    | 2.5 to 2.7 | Shed June 14. $\odot$ 5-11 longest, $\odot$ 3-4 12            |
| " 17    | " "        | are large the others, all stumps rounded.                     |
| " 18    | 3.0 cat    | Shiny spinous. Spinous black tipped.                          |
| " 19    | 4.3 "      | Shed June 17. rather elongate, the end horn                   |
| " 20    | 4.5 to 4.8 | well joint post forming a crown at each                       |
| " 21    | 5.5 shed   | end. $\odot$ 3-5, 12-13 and $\odot$ 4-5 12 long.              |
| " 22    | 6.0 cat    | other small & subequal. Translucent greenish                  |
| " 23    | 7.0 to 7.5 | horn & little yellowish & yellow marked line                  |
| " 24    | " "        | along each ridge. Spinous black on long horn                  |
| " 25    | 8.0 cat    | Shed June 21. Horns $\odot$ 3-13 large black $\odot$ 4-5 long |
| " 26    | 10.0 "     | & short 11-12 short & short, $\odot$ 4-5 12 large             |
| " 27    | 10.5 to 11 | shaded other short & small all black spinous                  |
| " 28    | " "        | Spinous white yellowish toward the stomach                    |
| " 29    | 11 cat     | shiny dark ventrally. on upper yellowish                      |
| " 30    | 13 "       | fine along each ridge and a line. I. are also                 |
| " 1     | 14 "       | fine red and obscure band a lat ridge. Horn                   |
| " 2     | 14 cat     | all between 5-11 ends more spinous yellow                     |
| " 3     | 15.5 "     | Shiny smooth shiny with sparse spinous                        |
| " 4     | 18 "       | granules on the lower obscure band marked                     |
| " 5     | 18 to 18.5 | Spinous black to their bases, the ends of horn                |
| " 6     | 18.5 cat   | $\odot$ 3 black, rest of the most dorsal spinous              |
| " 7     | 20 "       | cap. $\odot$ 13 ending in pale brown                          |
| " 8     | 20 "       |   |
| " 9     | 23 "       |   |
| " 10    | 23 "       |   |
| " 11    | 24 cat     |   |
| " 12    | 27 cat     |   |
| " 13    | 28 " fat   |   |
| " 14    | Spinous    |   |

1393

Eggs of *Eumeces subsignarius*, Hopk. 79352 from Pa. on beach and maple. 200 eggs by July 10, 1908. Ovoid, the anterio-microphylla end largest narrowest in one diameter by round flattened, mid. end truncate square with an elliptical thick rounded ridge around the rim of the truncation. Surface smooth, minutely shaped with reticulation. Olive green the raised rim of the truncation white.  $1.1 \times .8 \times .5$ . Laid flat on one side on oblique on large end in irregular curved rows.



1394

Paragonia on pine from Fiske Melrose Highlands Mass. July 1908. Adults, eggs and mature larvae.  
 Egg (laid by infertile ♀) spheroidal, base well rounded, micropyle strongly depressed, but smooth and rounded. Opaque white, greenish in the depression. Shell minutely hexagonally shaped. D. & height .7 mm.  
 Laid in groups adhering by white frothy gum.



Stage I (Aug 3) Hd rounded bilobed shiny black, flat before w. 5 mm. Body robust. slightly flat, with taper. 5th tubercle & 2 enlarged. Protruding. Solid luteous. The large tubercle black, giving a longitudinal banded effect, trace of a pale sd & lat. line. The lat. line between brownish shaded. C-sh black with wart. On 2-3. 3 small tubercles above lat. line. On abd i small ii large, iv absent, appearing a rudiment on 5 & 6 but smaller. Other moderate, many hair. On elliptical hairy plate on the slender elongated leg.



Two more from Fiske, Aug 17 1908.  
 Hd 1. full (sh. hd. 6 mm) rounded quadrate. D rather slight shiny black. Body robust, thick at the ends. Skin solid luteous, a broad blackish lateral band. Warts large solid luteous. Short black plumed tuft 5 & 2, single d 5 & 12, shorter grayer tuft 6 & 7. a few unimbricated white hair dorsally on 3, 4 and 8. Other hairs long, thin, grayish-brown. Red tubercle on 10 & 11 reddish. Feet pale, a pale band along substig. fold. 3-4 d. white with narrow black d. line.

Another hd. 6 mm shiny black. Body robust flattened. Warts large esp sd & 2. Blackish luteous substig fold and dorsum of 3 & 4 grayish white. Hair moderate thin dark, a few short plumed ones from i dorsally 5 more on 2 & 12. Venter blackish. The feet black abd. pale.



Shed Aug 27. Hd 1.2 (Hd 1.0) Same.

Shed Sept 5. Hd (Hd 1.1) Spun slight web between vandy and high. by high Sept. 10-

8/16/09

1395

*Schizura apicalis*?? on low bush blueberry in an open  
cultured field Lincolnville, Maine Aug. 15, 1908.  
Head elliptical, much higher than wide, scarcely exceeding  
joint 2 but separated by an incisive, flattened before  
a less than  $\frac{1}{2}$  as high as head. D. smooth, obagreened,  
green broadly whitish purple over the face above.  
Leaving the 4, narrow on anterior and side green. The  
purple is mottled with green towards the sides  
as a little patch of purple mottling on the side  
above & behind the vcelli. W. 2.5 mm. Body robust,  
compress, sloping up from 2 to 5 slightly. 5  
and 12 slightly humped. Thor. tubercle 1, forming  
high shiny brown cones, approximated dorsally.  
all the other tubercles minute except those on 2  
which are perceptible but inconspicuous and not  
elevated. Setae rather long black. Anal feet ele-  
vated, divergent, rather long. Green, mottled  
with whitish which forms a tessellated pattern  
on the dorsum 6-12. A narrow whitish purple band  
dorsally 2-5; 5 all purple except brokenly post.  
dorsally; a white straight lateral stripe along iii  
below which oblique purple shades to the feet cover  
most of 2-4 space; a small dorsal purple patch  
on 11 joins 12 which is more or less completely  
purple shaded to the feet joining the 3-4 purple  
area; the purple extends to a dorsal band onto 12  
the anal feet darker purple. Small purple  
patches at bases of thoracic feet which are pale.  
The green is mottled with white and dotted with  
purplish on one there  
is considerable dorsal  
purple shading on joint 6.  
The purple is darker around  
the spiracle of 5. There is a faint green dorsal line  
defined by the white mottling, which are also  
cut obliquely by green subdorsally. ii 5 whitish.





1396

Noctuid on golden-rod & woods. Lincolnville, Mo. Aug 17 1908. Hd 2.2 shining green, held obliquely vertex in 2, antennae rather long divergent whitish. Body rather slender, 2-4 tapering a little, 12 very little enlarged, feet 7-8 small but used, whitish green, rather strongly white shaded, d & lat line straight narrow white defined by darker edges: subd band white, even edged greenish filled broad above narrowly with brown 2-4 and 12. iv 6-7 opposite lower edge 0, on 11 below 0 but no very great difference. Tubercles white, i & ii large but more elevated. 0 white black-ringed. Feet greenish. Shields concolorous, unconfined.

1397

Phycita? on Nitrumum luteum, Lincolnville, Mo. Aug. 1908. Web at leaf after spring tube from tip usually after more than one together. Tube of fine loosely webbed, widening and reaching beyond the curled part of leaf. Eat whole leaf later after webbing in stem and cutting midrib.

Larva, Hd pale brown, slightly mottled with in 2. On large black dull. Thorax black. Body striped with various purples separated by narrow irregularly edged with purplish white d. sd. upper, lower lat. and stig. 5 or 6 are greenish with 2 parallel purple lines. Tubercles minute black. Anal plate greenish not lined.

Dec. 1909 - Sphitocera consobrinella Zell



Feb 10 1910 for Webster 39

1398

Eggs of Hemilephes yarapain from Dr. Webster seed. Hatched Dec 24, 1908 (described Dec 31) etc grass. Hd rounded shiny black, 2 setae rather coarse, whitish. Body subcylindrical uniform dark brown, unmarked. Spine black square with single long whitest seta.

On abd. i on a spine; ii from skin iii on a spine, iv + v on a spine. Lg plate with 2 small setae. On 12 a single forked d. spine for i, ii from skin. On 13 a single forked spine post, single f-d and single lat. none from skin. Anal plate bare black but with setae, anal fork plate





March 6  
1912

1399

*Monoleuca penifascia* Say 1830. July 15-1911  
at Tryon N.C. Eggs laid July 16-17-18. Laid freely  
on oak leaves with dead and fresh - not as glass  
Eggs Elliptical, gently flattened, uniform. Shiny  
pale yellow.  $5 \times 6 \times 2$  mm. Laid in packets of  
20 or more, well spaced, separated by nearly  
diameters of egg and curved loosely with short  
stiff white hairs that are not curved eggs but  
stand up. Length .5 mm. Surface rather  
coarsely fluted longitudinally marked with lines.  
The hair covering is compressed chiefly of short white  
hairs, some at both ends, stronger in stipe  
band at the ends.

Hatching first July 24. Head and pale yellow with  
large black beetle and projecting mouth. The feet  
smaller than the head. Body yellow. Body placed  
I. Head normal but 2 pairs of short bristles  
on each side. Head yellow. All body yellow.  
Head elongate, slightly flattened. Sides of head  
slightly depressed centrally. Horns yellow and 9 or 10  
each horn with 3 fine long hairs. Body  
white. Length 1.1 mm.

Shed July 25. Horns with many stinging spines with black  
tips. Horns subcylindrical, not alike. Pale  
yellow tips of spines only black. Sides  
of head and body brown flattened and oblique  
to space between 2. 5d a lat ridge rather  
prominent with short hairs. Sides of horn  
with short hairs. Lat. ridge. Little later a  
brown inflection between the horns esp. in  
ant. end. This end is lighter and the body  
slopes from the head. 3-5 slightly higher  
than rest of body and 1 horn a triple curve pro-  
minent but all the rest equal, perhaps 12 also  
a little prominent (other are ind. chry. and ind.  
and red oak but seem to prefer the softer leaves.)  
July 26. Sides curved like the head. Body yellow from  
head with short hairs. Shed July 31. Sides flattened and parallel. Flattened  
2-4 lat space rather narrow. The horn rounded  
apophysis moderate large. Sides 2-4 lat a  
little longer. Sides 2-4 lat a little longer. Horn and

subventral yellow with dense short spines, black tipped  
especially ①. Dorsum and lat. space solidly infiltrated  
with dark red. Body arches a little behind, flat before  
late red infiltration concentrated along sd ridge and  
a 5d still deeper.

Shed Aug 5. Moderately flattened, sitting curved spine  
long, the foot end a little depressed, side parallel.  
H. 1 lat space moderate, sd retracted. Horns subcylindrical  
2-3 a little pointed, spines numerous but short and  
weak. Pale yellow, a narrow d. lat line and brown  
dull red band under ① ridge. 2-4 also red infiltrated  
dorsally. 11 def. space shows staining as pale felt  
defined by the red. The red band lat. nearly reaches  
the lateral space nearly entire and defines the  
lat. def. spaces (4) which are pale and cut it.  
Late dorsum all gradually reddish infiltrated.

[at Weed Wm. - weeder down to 50° larvae can't shed]

Shed Aug 13. Rather strongly flattened but thicker than  
Euclyptus, the sides parallel except just, rounded and  
sd area rather prominent rounded bulging. Horn  
short, equal large, the spines contiguous but moderate  
and not darkly colored. ① 3 and 13 a little larger than  
the others, dull yellow, the horns with a trace of  
vermillion within under lens. R. sp. filled with  
dark red-brown of which a straight d. line is  
most distinct, the glomerula ① space appearing  
as large pale yellow dots. Outline of the d. sp. a  
narrow line. The expansion between the horns. V  
upper 1/2 of lat sp. dark red brown, the edge a little  
becomes and the center showing slight pale space.  
Region below dull yellow, the row of ② horns con-  
trasting by its slightly lighter shade. Horns strongly  
tuberculate, the spines numerous, long and black  
tipped but fine and inconspicuous. Pankled a

Aug 17. 60 cat. Little then began to cut whole leaf. Later the  
" 18 " 50 cat. vermillion in the horns becomes more distinct  
" 19 " " but general effect is of a dull rusty brown.  
" 20 " " The dark brown breaks through the sd ridge  
" 21 65 cat. between horn 3-4 hardly a 12-13 narrowly  
" 22 70 " a narrow black line appears above lat horn  
" 23 85 " Shed Aug 21. Elongate ends rather rounded, d. lat  
" 24 " " space moderate, moderate, sd retracted. Horn  
" 25 " " all subcylindrical, ① 3 and 13 a little larger  
also ② 3 larger curved. Other subcylindrical



VI

*Dorsum* purple with elongate white patches on (1) space dividing with a straight & sd wavy purple lines. (1) ridge pale yellow with central overmedian line, the horns overmedian tinted, horns & horn-rod. Last space with pale patch over (4) space pale yellow below. leaving purple line above wavy & central slightly raised. A livid purple wavy line each side of (2) ridge the horns orange tinted. 3-4 solidly purple shaded in interspace. Impured granular dots in (1) space. Skin rather densely granular shapeless.

Aug 26 8.5 by high

" 27 11.0 cat

" 28 13 "

" 29 13 1/2 shed

" 30 " "

Sept 1 " "

" 2 " "

Sept 3 " shed

" 4 16 cat

" 5 17 1/2 shed

Shed Aug 26 elongate elliptical, dorsum gently arched, rudimentary horn, sides oblique, v. retract. Horns (1) 3 and (1) 11 slender curved rather long and dark. Horn (2) 12 & (3) 4, 6-12 rounded sub-oval. Horn (4) 13 in a slender rounded horn. Surface pale opaque yellowish. A. a tail, space with 3 purple horn line, center straight, side line wavy, 2 smaller line & s-v space. Horn well shield (1) (1) granular dots darkish. Skin granular shapeless. Chae has a top of all last horns with a few callosities, the horns above the horns (1) & (2) largest & without callosities. Shed Sept 3 same, end horn patches black above the long (1) 13 and short (2) 12. Callosities at base of (2) 6-11 3 purple stained, its long horn tapered into purple. (2) ridge overmedian tinted the rounded tubercle dark apical. Dorsum pale pink, the horn 3 nearly black, a slight sd wavy (1) space dark with raised granular edge. A yellowish line to (1) ridge. Side line pinkish, its central line broken and wavy, rather purplish than black, the ruffe & lower horn black, upper well raised, lower less so. S-v carmine with 2 blackish line, the s-v edge reddish. Long horn (1) 13 purple as also (1) horn 4 & 6 slightly. Skin rather densely clear granular. Spines on horns white with black tips.

VIII

1400

*Hymenion pallialis* from Honolulu H9, described by Chittenden. First alectotus or alectotus. Egg more or less elliptical, strongly flattened on the sides and lower sides, smooth, minutely granular, white (in alcohol).  $6 \times 4 \times .25$  mm. Laid singly on leaf of leaf green midrib. Stage 5, <sup>rounded</sup> ~~elongate~~, not much higher than wide. <sup>slight</sup> notch at vertex. Smooth shiny testaceous whitish with 4 large black pigmented ocelli close together in a semicircle. Setae rather coarse, pale, their bases the ocelli darker. W. 2.6 mm. mouth brown. Body cylindrical slender uniform colorless or whitish. Setae coarse from small conical tubercles, 12 in row in line with some coarse thin spinules over them. ix & v supposed approx. vi wanting vii 9 3 at leg base. Legs long slender normal.

(Hd .6- .8 1.0 1.2; no certainty as to stage and 2 always containing missing). Whitish red & all, 2 black spots sd 3 & 4 on tubercles. Last stage Hd rounded higher than wide, notched at vertex. A. high. Whitish with brown patches on rostrum, legs and by central space of ground color. 4 pigmented ocelli in 3 and colorless 1 behind. Body cylindrical slender uniform, segments annulate irregular, all feet slender cylindrical the wanted circularly expanded, the widest is 2/3 circle broken on outer border. Setae fine from overlonger annulate tubercles. i & ii in line, ix & v approx. supposed, iii & vi normal, vii 9 3 well separated. Thor 2 with 6 on shield in 2 rows, shield conical, 2 each for prothoracic & 7-8 tubercles; 3 is 4 & 16 on a large conical tubercle, ii & ii 6 in line, iii about 10 & v approx. vi free. Long horn patch at edge of shield in 2 rows over ii a - ii b on 3. Spinules elliptical that of 12 larger than the others. Coarsely ocelli 6 which attached to 1st of setae subnormal. Body attached to pale horn by dark cream square



with a row of long slender stems back of the  
with hooked tips. 10 x 2.5 mm. Surface smooth  
during without sculpture

1401

Yerpen on wild morning glory, Chan's Bridge  
road, D.C., Aug. 14, 1917 (with Caudal)  
Joints 4-5 swollen. Hd rounded quadrate,  
shallowly bilobed,  $\Delta$  large, dark brown  
with 2 irregular edged white lines running  
up on each lobe & a point one below.  
Hd held flat as the line runs in direction  
of body. Body cylindrical swollen  
4-5 10-12 contracted, feet normal, smooth  
faintly annulated; dark brown the sides  
marked with white oblique lines. The  
marking starts on 6, as a triple stop. Row  
of white dots on a reddish ground, consoli-  
dated into 2 oblique white marks on the  
ant. halves of 6-9. the large streak in the  
hind, the upper running from before the  
spiracle to ant. edge of segment subdorsally  
a dorsal and sd band of pale white dots  
running whole length of larva, 2-5 also  
dotted laterally and a little marked  
in dark brown & flesh-color on the swollen  
part laterally. Venter with a narrow white  
line the whole length and several rows of  
white dots between it and lateral band.  
A pale stigmatal area 10-13 running ant-  
post of 10 and forming a white line on post  
of 13. The feet dark brown, dotted with white.  
Spun Aug. 16 a large loose web, almost invisible  
in the midst of which he sits as if hanging in  
the air between the leaves.

Out Aug 21, 1917 Exastria amaturaria Walk.



1402

Larvae on a weed and box elder, Phummers  
Ed, Md. by H. S. Barber, Aug. 17, 1917.

Hd rounded bilobed, small, violaceous brown,  
dark on vertex, <sup>antennae black</sup>, Body cylindrical,  
thick, a little enlarged & enlarged bases of  
ii and iii on 6, 12 angled & enlarged i bases.  
Thorax small, bare at an angle at 4. Dark  
brown (forming plaques laterally 5-7) marked  
with lilacous on 5-9 dorsally pale oblique  
bands which form ellipses anteriorly. On  
8-9 laterally a light yellow oblique mark  
small & angled on 8, a patch on 9, running  
in a line to base of foot on 10. All other  
marks shaded & marbled, then distinct.

1403

Noctuid on ~~goldenrod~~<sup>aster</sup> flowers, Glen-  
carlyn, Va. by H. S. Barber, Oct. 3, 1922.

Hd rounded, vertex under 2, pale green on  
the sides with diffuse black bars, face  
black, a broad pale green line clippers,  
epistoma pale green. Antennae pale.  
Skin dull, wrinkled (Moagreened). A  
broad light orange-red dorsal band,  
constricted on 2, and on hump on 12.  
S-d black running down broadly to 11 and  
narrowly ant. & prob. on scap. Dorsum  
pale pea-green. A broad bright orange red  
substom. line, slightly wavy on scap.  
without border, but black on tubercles  
and bars in incisions ant. & prob. Venter  
& feet pale pea-green. The pale green runs  
up to dorsal red line on 2 (ant & prob) 12,  
13 and 14. Tubercles invisible. spiracles

Cucullia affarata Stuck







679<sup>5</sup>/<sub>8</sub>



